

**RESPONSE UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 2100**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor : Judy M. Gehman Appln. No.: 10/817,419 Filed : April 1, 2004 For : SYSTEM AND METHOD FOR IMPLEMENTING MULTIPLE INSTANTIATED CONFIGURABLE PERIPHERALS IN A CIRCUIT DESIGN Docket No.: 03-2477/L13.12-0258	Group Art Unit: 2182 Examiner: Jasjit S. Vidwan
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
PO Box 1450
Washington, D.C. 20231-1450

Electronically Filed
November 26, 2008

Sir:

The applicants hereby respectfully request review of the final rejection of claims 1-7 and 16-20 in the above-identified application. No amendments are being filed with this request. A Notice of Appeal in this case is filed herewith.

Remarks: The rejection of claims 1-7 and 16-20 is based on clear legal deficiencies

This Pre-Appeal Brief is in response to the Final Office Action dated September 30, 2008, in which all of pending claims 1-7 and 16-20 (hereafter “the present claims”) were subject to a final rejection under 35 U.S.C. 103. The applicants respectfully request that the rejection of claims 1-7 and 16-20 be reconsidered and withdrawn and that these claims be allowed. The applicants respectfully submit that this action would be the appropriate outcome of this pre-appeal because the rejection of claims 1-7 and 16-20 was based on clear legal deficiencies, as detailed in the applicants’ Amendment After Final, dated February 14, 2007, and as elaborated below. The applicants herein elaborate on the remarks in that Amendment After Final demonstrating the clear error of the rejection, and request that the pre-appeal conference panel withdraw the final rejection and allow claims 1-7 and 16-20 in light of those remarks.

Clear legal deficiencies I:

The rejection relies on material mischaracterizations of the claims and the cited references

In the Final Office Action of September 30, 2008, claims 1, 2, 4, 5, 16, 17, and 19 were rejected under 35 U.S.C. §103(a) with reference to Paul et al. (U.S. Patent No.6,466,972) and Dickie et al. (U.S. Patent No. 4,775,931), and claims 3, 6, 7, 18, and 20 were rejected under 35 U.S.C. §103(a) with reference to Paul, Dickie, and Spencer (U.S. Patent No. 6,044,225). However, these rejections were made final despite that the applicants demonstrated in the Applicants’ Response dated July 7, 2008 that the characterizations of the claims and the cited references on which the rejections are based are clearly deficient due to their mischaracterization of the language of the claims and the references. In particular, on pages 2 and 3 of the Applicants’ Response, the applicants showed how the language of the present claims was mischaracterized such that the combination of Paul and Dickie does not disclose or suggest all the elements of any of claims 1, 2, 4, 5, 16, 17, and 19, and the combination of Paul, Dickie and Spencer does not disclose or suggest all the elements of any of claims 3, 6, 7, 18, and 20.

For example, claim 1 recites in part, a device hardware abstraction software layer adapted to configure multiple instantiations of a peripheral device within an integrated circuit. The Final Office Action asserts that this is disclosed by subject matter of Paul that discloses that machine classes, that are instantiated with machine-specific information, can be stored in a database. The machine classes of Paul constitute configuration information for controlling multiple outside

computers. The machine classes themselves do not constitute multiple instantiations of a peripheral device. Even the machine classes are disclosed only to be stored in a database, which is very different than being within an integrated circuit. Storing configuration information for remote computers in a database does not constitute disclosure or suggestion of multiple instantiations of a peripheral device within an integrated circuit. Additionally, multiple outside computers cannot validly be characterized as peripheral devices within an integrated circuit.

This showing by the applicants is addressed in the Response to Arguments section on page 2 of the Final Office Action, only by way of repeating the same arguments already rebutted by the applicants, and arguing that for the machine instances of Paul to be stored on a computer, they would be present within an integrated circuit. The applicants submit that the mere possibility for machine classes to be stored on a computer does not imply multiple instantiations of a peripheral device within an integrated circuit.

As for the other cited reference, Dickie discloses writing base addresses for peripheral devices in a configuration register for a CPU. This is very different from defining offset values for registers of the peripheral device. Dickie makes no mention of offset values for registers, only of writing and removing base addresses themselves. The base addresses in Dickie are defined for the CPU itself, and therefore in the hardware, and are not being defined by a hardware abstraction software layer. Furthermore, Dickie refers to devices peripheral to a CPU, such as a display or a printer. In contrast, claim 1 recites, in part, multiple instantiations of a peripheral device within an integrated circuit. The devices peripheral to a CPU in Dickie do not disclose or suggest subject matter relating to multiple instantiations of a peripheral device within an integrated circuit. Additionally, neither of the references mentions a hardware abstraction software layer of any kind.

The applicants therefore respectfully submit that claim 1 recites many elements that are not disclosed or suggested by the combination of Paul and Dickie, and that this is true also of claims 2-7 due at least to their incorporation by dependency of the subject matter of claim 1, and of claims 16-20 due at least to elements thereof that are analogous to those of claim 1 as discussed above.

Therefore, the applicants respectfully submit that the rejection of the present claims rests on clear mischaracterizations of the claims and the cited references.

Clear legal deficiencies II:

The rejection relies on a material misinterpretation of the law of obviousness

The applicants also respectfully submit that the rejection of the present claims is also predicated on improper criteria for evaluating obviousness, as the applicants made clear in the Applicants' Response.

In addition to the fact that many individual elements of the claims are not disclosed or suggested by the combined references, there was also no valid motivation or reason why someone of ordinary skill in the art would have been prompted to combine the disclosures of Paul, Dickie, and Spencer. Paul deals with a server that manages the configuration of remote computers on a network. Dickie deals with a CPU that is enabled to reconfigure identification registers for devices peripheral to the CPU, for a single computer. Spencer deals with managing multiple parallel data streams for multimedia applications.

Even if the combined cited references were to disclose or suggest all the elements of the present claims, the invention is not obvious unless there also would have been, at the time the invention was conceived, a motivation or reason for a person of ordinary skill and creativity in the art to have combined the elements disclosed or suggested by those references in the way recited in at least the independent claims. The applicants respectfully submit that the proposed reasons to combine provided in the Office action clearly exceed the scope of reasons to combine provided by the Supreme Court in *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. ____, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007), and that there was no sufficient motivation or reason to combine Paul with Dickie or with Spencer. This provides an additional and independent rationale for withdrawing the rejection of all of claims 1-7 and 16-20 under §103.

In particular, the Supreme Court in *KSR* said a person of ordinary skill in the art (POSA) "has good reason to pursue the known options within his or her technical grasp" when "[1] there is a design need or market pressure to solve a problem and [2] there are a finite number of identified, predictable solutions" (*KSR*, slip op. at 17; 82 USPQ2d 1385, 1397). The Court of Appeals for the Federal Circuit has since interpreted the second element of this to mean "a finite, and in the context of the art, small or easily traversed, number of options", where subject matter outside that small, easily traversed number of options does not "support an inference of obviousness". *Ortho-McNeil Pharma. v. Mylan Labs*, slip op. at 9-10, 86 USPQ2d 1196, 1201 (Fed. Cir. 2008). In *Ortho-McNeil*, the Federal Circuit found the claimed invention non-obviousness at several levels, where a

POSA would not even have been likely to start where the inventor did, the POSA also faced too many unpredictable variables without a given reason to select among them as the inventor had, and the POSA would have had to explore properties far afield from the inventor's initial purpose.

In this case, the three cited references do not represent a small or easily traversed number of identified, predictable options for solving a single problem. Instead, they represent disparate pursuits of solutions to problems in several, widely divergent fields. As in the facts behind *Ortho-McNeil*, a person of ordinary skill in the art of any one of the cited references would have faced too many unpredictable options without any advance reason for investigating each of the fields of the three references, including configuration of remote computers on a network, reconfiguring identification registers for devices peripheral to a CPU in a single computer, and managing multiple parallel data streams for multimedia applications. These references address a wide variety of problems far afield from the subject matter of the present claims. A person skilled in the art also would have had no advance reason to discover and cherry-pick the claimed elements out of each of these disparate references. Additionally, as indicated above, neither of these references discusses multiple instantiations of a peripheral device within an integrated circuit, so even a person skilled in the art given the benefit of the asserted motivation and with the cited references in hand, would not have been able to arrive at the subject matter of the present claims. As a further indication of the lack of a valid reason to combine, the U.S. classifications and fields of search for all three references are entirely non-overlapping.

The Office action asserts that the rationale for combining the cited references for claim 1 would have been to take advantage of effectively communicating with peripheral devices to the said system. This amounts to a merely generic and *post hoc* allegation that the claimed combination provides utility. This assertion that a person in the art would have desired a generalized effectiveness does nothing to assert how the cited references might *a priori* have provided a rationale for a person in the art specifically might have been prompted to investigate and combine the specific combinations of elements recited in the present claims. It also does not indicate how a desire for effectively communicating with peripheral devices would have translated into a small or easily traversed number of identified, predictable options that would have included the cited references. The generic allegation of effectiveness for the claimed combination, as relied on for the present rejection, is indistinguishable from an allegation of usefulness for the claimed combination. Utility is itself a requirement for patentability, and for utility alone of a

combination to be taken as conclusory evidence of a reason to make the combination, requires the absurd result that all possible inventions would have a reason to be made, and would therefore be obvious and be excluded from patentability. A distinction must be recognized between such a bare description of utility, and a specifically supported reason to make a specific claimed combination; otherwise, no invention could be both useful and non-obvious. Thomas Edison's lightbulb was no less inventive for the fact that its combination of elements was effective. To argue otherwise would be to exaggerate the holding of *KSR* to make mere utility into a source of obviousness that denies the possibility of invention.

Therefore, the applicants respectfully submit that, even if the cited references disclosed or suggested all the elements of any of the present claims, the proposed reasons for combining the cited references far exceed the proper scope of reasons to combine under the controlling precedents of *KSR* and *Ortho-McNeil*, and do not support a valid showing that claims 1-7 and 16-20 are obvious. The applicants therefore respectfully request that the rejection of claims 1-7 and 16-20 be reconsidered and withdrawn.

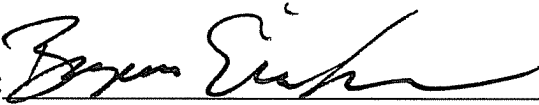
Conclusion: Claims 1-7 and 16-20 as amended are in condition for allowance

In light of the discussion herein, the applicants respectfully submit that the rejection of claims 1-7 and 16-20 was in clear error, and respectfully request that the pre-appeal conference panel reconsider and withdraw the rejections, and allow claims 1-7 and 16-20.

The Director is authorized to charge any additional fees associated with this paper or any paper in the prosecution and appeal of this application or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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